



# Welcome to the Texas Water Research Network

December 9, 2021  
Virtual Winter Meeting  
University of Texas at Austin

**Sponsored by The Cynthia & George Mitchell Foundation, [www.cgmf.org](http://www.cgmf.org)**



The University of Texas at Austin  
Environmental Science Institute



# TWRN Mission

---

Bringing researchers together in addressing the resilience of Texas water resources to changes in natural and human systems, and to facilitate connections between researchers, stakeholders, and decision makers



# Goals for meeting

---

- Provide a setting for new and existing members to network
- Provide learning opportunities on key issues related to Texas water resources
- Promote interaction between researchers, stakeholders, and decision makers



# TWRN Meetings Evolution

---

- May 2015: Network purpose and niche
- December 2015: Grand challenges, mission
- August 2016: Nodes and network efficacy
- May 2017: Science of communication, key issues for policy makers and managers
- January 2018: Science-stakeholder interaction in producing research
- September 2018: Water markets, flood resilience
- May 2019: Water technologies, climate projections
- May 2021: Polar vortex, COVID, vulnerable communities
- **December 2021: Water infrastructure, Equity, Sustainability**



# TWRN Recent products & opportunities

---

**Glazer, Y.,** Tremaine, D. Banner, J., Cook, M., Mace, R., Nielsen-Gammon, J., Grubert, E., Kramer, K., Stoner A.M., Wyatt, B.M., Mayer, A. Beach, T., Correll, R., & Webber, M. (in press). Winter Storm Uri: A test of Texas' water infrastructure and water resource resilience to extreme winter weather events. *Journal of Extreme Events*.

**Nielsen-Gammon, J.,** Banner, J.L., Cook, B.I., Tremaine, D.M., Wong, C.I., Mace, R.E, Gao, H., Yang, Z.-L., Gonzalez, M.F., Hoffpauir, R., Gooch, T., and Kloesel, K., 2020, Unprecedented drought challenges for Texas water resources in a changing climate: What do researchers and stakeholders need to know? *Earth's Future*, doi/full/10.1029/2020EF001552

**NSF INCLUDES proposal.** *WATE<sup>3</sup>R: A national alliance to broaden participation by URM students & communities through water resilience and environmental justice.* Over 15 institutions, including UT RGV (Cheng), TAMU Prairie View (Fares), UTSA (Godet), UT Austin (Banner).

[banner@jsg.utexas.edu](mailto:banner@jsg.utexas.edu)





# TWRN: Where do we go from here?

---

- 2021-2022: Quarterly virtual meetings convened around research topics of timely societal significance
- Re-engage existing membership and increase representation of URM members
- Workshop within meeting to synthesize key findings for communication (Environmental Science Institute website, white paper, journal articles, etc.)
- Positioning TWRN expertise to aid in decision making for future water resilience



# Grand Challenges

---

What forcing factors and feedbacks drive the coupled natural-human system that comprises a rapidly-growing and demographically-shifting sentinel community in a climatically-sensitive region (100<sup>th</sup> Meridian)?

How can we project the impacts of the natural and human systems on each other to produce a regional-scale assessment of urban water resiliency that can be used to inform effective solutions through education, policy and technology?